



P0AE9

Hybrid/EV Battery Temperature Sensor D Circuit Range/Performance

P0AE9 indicates that the hybrid or electric vehicle battery pack's temperature sensor D is reporting a signal that falls outside the expected range or is not performing as designed. The battery energy control module compares this sensor's reading against other temperature sensors and operating conditions, and it sets this code when the signal is implausible, stuck, or erratic.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Hybrid propulsion

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Reduced electric-only driving range or forced engine operation in a plug-in hybrid
- A noticeable drop in battery charging or discharging performance
- Possible derating of power output, especially during aggressive acceleration or high ambient temperatures
- Often no symptoms besides the warning light, particularly in mild weather or gentle driving

Common causes, most likely first

- 1 Faulty battery temperature sensor D itself, due to internal failure or contamination
- 2 Damaged or corroded wiring or connector at the sensor or along its circuit
- 3 Open or short circuit in the sensor signal or return circuit
- 4 High-voltage battery pack overheating from a cooling system fault, such as a failed fan or blocked duct
- 5 Battery energy control module software issue or internal fault in the sensor interface
- 6 Poor electrical connection at the battery pack harness pass-through connector



How to diagnose and fix it

- 1 Use a scan tool to read all battery temperature sensor values and compare sensor D against the others for plausibility
- 2 Visually inspect the sensor D wiring harness and connector for chafing, corrosion, or loose pins
- 3 Measure the resistance of sensor D at ambient temperature and compare it to the manufacturer's specification
- 4 Check the battery cooling system operation, including fans, ducts, and coolant flow where applicable
- 5 Perform a wiggle test on the harness while watching live sensor data to catch intermittent faults
- 6 If the sensor is faulty, replace it according to the service information and clear the code
- 7 Verify the repair by running the battery pack through a charge and discharge cycle and confirming the code does not return

What the battery temperature sensor D code hides

- A battery temperature sensor code often sets because of a cooling system problem rather than a failed sensor, so always verify that the pack is actually being cooled before condemning the sensor.
Sensor D is one of several temperature sensors in the pack, and a single skewed sensor can cause the control module to derate power even when the pack is not genuinely hot.
- Intermittent connector faults at the high-voltage pass-through are a common cause that does not show up during a simple resistance check at the sensor.
- After replacing a sensor, some vehicles require a battery pack learn or calibration procedure, and skipping it can cause the code to reset immediately.
This code does not always mean the battery is overheating; it can also set from a signal that is stuck within a plausible range but does not change as expected during warm-up or cool-down.

Can I keep driving with P0AE9?

You can usually continue driving with this code, but avoid aggressive acceleration, sustained high speeds, and fast charging until it is diagnosed, because the control module may not be able to protect the battery properly. If the hybrid system warning light flashes or power output is severely reduced, stop driving and have the vehicle inspected.

Tools that help

- Hybrid-capable scan tool with live data and battery pack temperature readouts
- Digital multimeter with resistance and voltage measurement
- Manufacturer service information for sensor resistance specifications and location
- Insulated hand tools and personal protective equipment for high-voltage safety
- Wiggle test leads or back-probe kit for intermittent circuit testing



Reading P0AE9

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
A	Hybrid propulsion.
E9	The exact fault within that area.

Often seen with

P0A9C Hybrid/EV Battery Temperature Sensor A Circuit Range/Perform · **P0AE8** Hybrid/EV Battery Temperature Sensor D Circuit · **P0AEA** Hybrid/EV Battery Temperature Sensor D Circuit Low · **P0AEB** Hybrid/EV Battery Temperature Sensor D Circuit High · **P0AEC** Hybrid/EV Battery Temperature Sensor D Circuit Intermittent/

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0ae9/>

